



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/627,392

07/25/2003

Yoshichika Kato

KPO180

3934

25271

7590

02/04/2005

GALLAGHER & LATHROP, A PROFESSIONAL CORPORATION
601 CALIFORNIA ST
SUITE 1111
SAN FRANCISCO, CA 94108

EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,392

Applicant(s)

KATO, YOSHICHIKA

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03, 07/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim 3 is objected to because of the following informalities: Claim 3 is vague and indefinite because it is unclear whether the electrode is formed on the film or the film is formed on top of the electrode. Appropriate correction is required. For the purposes of advancing prosecution on the merits the examiner will assume the electrode is formed on a film and a film is formed on the electrode.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2834

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cabuz et al. (Cabuz) (US 6351054). Cabuz teaches an electrostatic MEMS actuator having electrodes 15, 17 driven in and out of contact by an AC signal, where the moving electrode 15 is resiliently mounted on a buckled support.

6. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Goldsmith (US 6608268). Goldsmith teaches an electrostatic MEMS actuator having electrodes 110, 114 driven in and out of contact by an AC signal, where the moving electrode 110 is resiliently mounted. The stationary electrode 110 has an insulating film 1110 formed over the entire surface of the electrode and the electrode is formed on the surface of film 216. Goldsmith teaches projection 116 on the surface of the electrode

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith (US 6608268) in further view of Pillans et al. (US 20040124073). Goldsmith

Art Unit: 2834

teaches every aspect of the invention except the insulating film over four projections on the upper surface of the electrode. Pillan teaches an insulating film 23 over the projections 21 on the electrode 22 to prevent latching. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the actuator of Goldsmith with the film on top of the electrodes to prevent latching as taught by Pillans and to insulate the moving and stationary electrodes.

9. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cabuz et al. (Cabuz) (US 6351054), in further view of Pillans et al. (US 20040124073). Cabuz teaches an oscillator which periodically varies the AC drive signal. Cabuz teaches every aspect of the invention except the insulating film over four projections on the upper surface of the electrode. Pillan teaches an insulating film 23 over the projections 21 on the electrode 22 to prevent latching. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the actuator of Cabuz with the film on top of the electrodes to prevent latching as taught by Pillans and to insulate the moving and stationary electrodes.

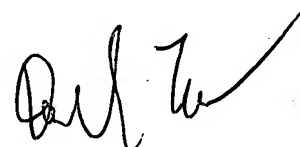
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the

Art Unit: 2834

examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KARL TAMAI
PRIMARY EXAMINER

Karl I Tamai
PRIMARY PATENT EXAMINER
February 1, 2005

References: 6608268, 6351054, 20040124073, 20040032185